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ABSTRACT

This student guide is intended to assist persons employed as supervisors in improving their economics and financial management skills. Discussed in the first three sections are the following topics: costs and cost centers (cost information and decisions; costs; cost statements, units, centers, and codes); cost centers and the supervisor (techniques of product costing and the relationship between cost centers and material and labor costs); and cost centers and overheads (overheads and allocation, apportionment, and transfer of overheads). Each of these sections contains an introduction, sections of instructional text that are interspersed with reinforcing learning activities, and a section summary. The fourth part of the guide includes a series of performance checks (an end check, a tutor check, and a work-based project). A unit review, which also includes a description of related extension courses and resources, concludes the guide. (MN)

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An Open Tech Project

SUPERVISING

ECONOMIC AND FINANCIAL ASPECTS

75: Cost Centres

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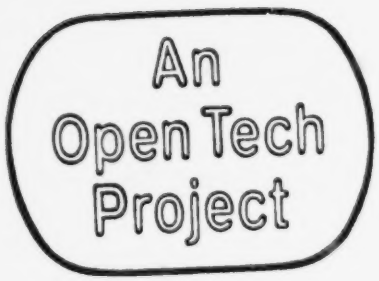
75: COST CENTRES

Alastair Clelland



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A Clelland
Cost Centres (Number 75 in the CHOICE SERIES of learning units)

Series Editor: Harry V Pardue
Northern Regional Management Centre.

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WORKING GUIDE TO THIS UNIT IN YOUR DEVELOPMENT PROGRAMME

This Unit is now your personal property - it's not for handing back to your training officer or to a tutor. It is your working book.

The Contents will increase in value to you each time you write on one of its pages. This is a working text for your personal notes - without notes its value is limited.

Qualifications forget about certificates and diplomas - you don't need them for this programme. What you do need is the wish:-

* to do your job better
* for personal development

Your study time is really up to you - we guess you will need about 8 hours in total. But it's your time - spend as long as you like.

How am I doing? you can judge for yourself by checking out how well you cope with the tasks we call Activities and Self Checks which occur throughout the unit. You can also get the Tutor Check and/or the Work Based Project to your tutor for an unbiased view of your progress.

Work Pace it's really up to you and depends on your interest. However, if you do well on the Activities and Self Checks, you could afford to speed up a little. Of course, if you don't do as well as you expect then you could slow down a little or flick back into the unit for a quick review of the more difficult ideas.

When in doubt - ask or seek help from:

* your family and friends
* colleagues at work
* your company training staff
* other open learners
* your tutor, by phone, by a visit to your support centre or by dropping your tutor a line through the post.

Don't worry if what you learn doesn't seem to be of use to you now, remember that times change - it may be useful one day. Anyway, just knowing more improves personal confidence.

So now make a start:-

75: COST CENTRES by Alastair Clelland

ABOUT THIS UNIT

Every business needs detailed information about its costs. This involves having a breakdown of how costs are incurred in every department and at every stage of a job. With this information, the final cost of the product or service can be calculated and costs throughout the business can be controlled efficiently.

Costs aren't just something which are the concern of accountants and senior managers. Quite frequently you, as supervisor, will be the first person involved in the collection of information and the control of costs. You have an important part to play in the costing system in your workplace.

IN THIS UNIT WE WILL:

* identify costs and cost centres
* think about how you gather and pass on cost information
* see how overheads affect cost centres
* think about controlling costs within a cost centre

AUDIO TAPE Side 1

Before you continue through the unit, you should now listen to Side 1 of the audio tape that accompanies this unit. You will find it useful if you refer to the unit objectives shown below whilst you listen to the tape. You may wish to make the objectives clearer to yourself by making a note or two on the page as you listen.

OBJECTIVES

When you have completed this unit you will be BETTER ABLE to:

* **identify a cost and a cost centre**
* **recognise your role in the costing process**
* **identify the effect of overheads on your cost centre**
* **distinguish between the costs over which you have some control and those which are outside your control**

PART A COSTS AND COST CENTRES

1 Introduction

Information about costs is necessary before almost any important management decision can be made and the process of collecting that information will often start with you, the supervisor.

Let's begin by looking at some examples of the sort of decisions I mean.

2 Cost Information and Decisions

ACTIVITY 1
Time guide
5 mins

Here are three questions asking for information about costs before a management decision can be made in each case.

Jot down what you think could be one decision which arises from information being given in answer to each of the questions.

a

Which costs more to produce? A Metro or a Mini?

* _____

b

How much does it cost to feed a patient in hospital for a week?

* _____

c

Can coal from a certain coal mine be sold at more or less than the cost of extracting it?

* _____

Obviously a lot of decisions could hinge on the information about costs but here are the decisions which I think might be made in each case. You may well have thought of some others.

a

Which costs more to produce? A Metro or a Mini?

Once costs were given to answer this question you could use this information to help you decide how much to charge for a Metro or a Mini.

This is a PRICING DECISION.

b

How much does it cost to feed a patient in hospital for a week?

I think in this case the most likely question is how that cost could be reduced. This might lead the hospital authorities to investigate whether it was cheaper to pay for outside suppliers to cater for patients or to prepare food themselves. Now, there may well be other things apart from costs which affect our decision here. However, in making a decision as to whether to make or provide something ourselves or buy it in from elsewhere, costs are usually important. Decisions like this are often called make or buy decisions. So,

This is a MAKE OR BUY DECISION.

c

Can coal from a certain mine be sold at more or less than the cost of extracting it?

Mines in which the coal costs more to extract than it can be sold for have been closed down because they are unprofitable.

This is a CLOSE DOWN DECISION.

Now, as with our two earlier kinds of decision, costs may not be the only thing we look at. But, once again, costs are likely to be important.

The three kinds of decision we have looked at - pricing, make or buy and close down - are common major decisions made in a wide range of industries. Without collecting information about costs on a regular basis, organisations may not even know whether a particular process makes a profit or runs at a loss or whether it would be cheaper for them to make something themselves or buy it in. So, costs and cost information are important to managers making a wide range of decisions.

WITHOUT COST INFORMATION, MANAGERS CANNOT MAKE PROPER DECISIONS

3 Costs

We've seen how important it is to have information about costs as the basis for decision-making. But what exactly do we mean by 'cost'.

REFERENCE 1 page 78

The Institute of Cost and Management Accountants' Official Terminology defines cost like this:

> 'The amount of expenditure incurred in or attributable to some object or some activity'.

All that means is the cost is the money spent, directly or indirectly, on something which is produced (a car or a ton of coal, for instance) or on some activity (eg running a hospital canteen or a hospital cleaning service).

There's one important point to understand about 'money spent'.

In business, we account for costs at the time they arise even though we may not actually pay for them until later.

EXTENSION 1 page 77

I'm only just going to mention the point here. If you'd like to understand more about this you might find it useful to work through another unit in this series, Accounting for Money.

ACTIVITY 2
Time guide 2 mins

Suppose, for example, your workplace received an electricity bill of £100 for the quarter January, February and March. The bill isn't actually paid until May.

In your records, would you show the cost as relating to:

a) January, February and March |___|
b) May? |___|

Tick whichever answer seems appropriate.

I hope we can agree that a) is the right answer. The cost relates to the period when it was incurred, not to the time it was actually paid.

Having cleared that up, let's go back to our definition of costs. We said that costs were incurred directly or indirectly on something which is produced or on some activity.

What do we mean by that?

Every organisation has direct and indirect costs but, as what we do is so varied, let's look at two separate examples. We'll start with a factory producing cars.

Its direct costs are any costs which are directly related to producing cars - eg sheet steel, paint-spraying operative's time.

ACTIVITY 3
Time guide
3 mins

Jot down three examples of direct costs of producing cars.

* _____

* _____

* _____

You might have thought of any number of things. I would group them like this:

* Raw Materials - rubber, glass, metal, electronic components, upholstery

* Wages - all assembly workers at each stage of manufacture.

Now let's take the example of a hospital which doesn't actually produce anything in the way a factory does.

ACTIVITY 4
Time guide
3 mins

Imagine a ward in a hospital. Jot down two examples of direct costs which are incurred in the ward. (Remember, you'll find the headings Raw Materials and Wages useful.)

* _____

* _____

We may well have thought of different things but here are the direct costs I would identify. The purpose of a hospital ward is to care for sick people and make them well again. That needs nursing care and medical treatment.

So direct costs include

nurses' wages
drugs.

In our hospital, there may also be expenses arising from providing the health care service - the electricity used to keep a patient on a heart monitoring machine for example. Direct expenses like these are also direct costs, since they arise directly out of the things the hospital does for patients. So, you may also have thought of a direct expense.

Direct costs in any organisation are usually called

PRIME COSTS

Now let's have a look at indirect costs.

Indirect costs are any costs which are incurred for the entire workplace and which cannot be attributed to any one unit of production or any one activity.

So, for instance, the cost of having a receptionist in the factory or the hospital is an indirect cost. For that matter, the cost of maintaining the building to house the factory or the hospital is an indirect cost too!

ACTIVITY 5
Time guide
3 mins

Jot down three more examples of indirect costs in a factory.

* _____
* _____
* _____

Here are a few suggestions though these are by no means all.

* Caretaker's wages
* Security staff wages
* Cleaning materials
* Rates for the factory premises
* Maintenance engineer's salary
* Electricity for heating and lighting
* Production supervisor's salary.

Perhaps you were surprised by the last item on the list. The reason is that the job of a supervisor is felt to be that of supervising the workteam and it is the workteam who are directly involved in manufacture.

Indirect costs are usually called OVERHEADS. They can be grouped under three main headings:

* FACTORY OVERHEADS

* ADMINISTRATIVE OVERHEADS

* SELLING AND DISTRIBUTION OVERHEADS.

Administrative overheads means basically the cost of running 'the office'. So this includes the salary of the accountant and his staff, the purchasing department, stationery, postage etc.

ACTIVITY 6
Time guide
3 mins

Jot down three more examples of administrative overheads with which you are familiar - think about your own workplace because every organisation has administrative overheads.

* _____

* _____

* _____

You may have thought of any number. Here are a few which spring to my mind:

* rent and rates for office space

* telephone switchboard

* telephonist's wages

* rental of office equipment eg photocopier

* legal costs.

Now let's have a look at our third group of overheads, selling and distribution.

Although they are usually grouped together, they are actually separate costs.

* SELLING COSTS - Any costs incurred in securing orders.

* DISTRIBUTION COSTS - Any costs (including warehouse costs) incurred in delivering the final product to the customer.

ACTIVITY 7
Time guide
3 mins

Here is a list of Selling and Distribution costs. Decide whether each one is a selling cost or a distribution cost and write S or D beside it as appropriate.

Sales staff's salaries

Commission

Rental of warehouse space

Petrol for delivery vans

Insurance for sales staff cars

Advertising

Warehouse manager's salary

Costs of getting empty bottles back from customers

I hope we can agree that the sales staff's salaries, commission, insurance for their cars and advertising are selling costs - all necessary to secure orders in the first place.

Rental of warehouse space, petrol for delivery vans and the warehouse manager's salary are distribution costs which arise from making sure the product is delivered to the customer. The cost of getting empty bottles back is also a distribution cost. If we use returnable bottles then we need them back in order to make future deliveries.

Perhaps you'd like to firm up on what we've said so far by doing the following self check.

SELF CHECK 1
Time guide
5 mins

Complete the following statements with a suitable word or group of words.

a) Cost information is needed to make _____.

b) The collection of cost information often starts with the _____.

c) Cost is the _____ _____, directly or _____, on something which is produced or on some _____.

d) Costs relate to the period in which _____.

e) Direct costs usually comprise _____ _____ and _____.

f) A supervisor's wages are an example of _____ costs.

g) _____ costs cannot be attributed to one particular product or activity.

h) Selling costs are costs incurred in _____ _____.

i) Distribution costs are costs incurred in _____ goods.

The answer to this self check is here in the following words so you will need to check out your answers carefully. a) Cost information is needed to make decisions. b) The collection of cost information often starts with the supervisor. c) Cost is the money spent, directly or indirectly, on something which is produced or on some activity or service. d) Costs relate to the period in which they are incurred not to the time at which they are paid. e) Direct costs usually comprise raw materials and wages. f) A supervisor's wages are an example of an indirect cost. g) Indirect costs cannot be attributed to one particular product or activity. h) Selling costs are incurred in securing orders. i) Distribution costs are incurred in delivering goods.

4 Cost Statements

A cost statement is often used to show the breakdown of the sort of costs we have just looked at so that the final cost of a product or service can be analysed.

Let's begin by looking at a manufacturing example. It's helpful in manufacturing to identify another cost - the total factory cost.

The total factory cost includes all our prime costs. But it also includes all the indirect costs which arise out of our need to keep the factory (but not the offices) running. We'll call these costs our factory overheads.

This is what the cost statement for a car might look like.

ACTIVITY 8
Time guide
5 mins

Cost structure of a car.

	£	£	
Direct Material		1000	
Direct Labour		750	
PRIME COST		1750	
Factory overheads		1000	
TOTAL FACTORY COST		2750	
Administrative costs	500		
Selling and Distribution Costs (including dealer's profit)	750	1250	
Total Costs		4000	
Profit		500	
SELLING PRICE		4500	

Jot down one example of an appropriate cost beside each cost shown in this cost statement.

Of course you could have thought of all sorts of things since the manufacture, selling and distribution of a car is a complex process involving many people.

Under PRIME COSTS, you could have identified any of the raw materials which go into a car and the wages of anybody directly involved in production.

Factory overheads may have included heating, lighting, safety, security or the provision of a place in which to work. Administration could be, for instance, anything to do with purchasing, payments or any of the paperwork involved in running a business.

Selling and Distribution would include advertising, promotions and the cost of actually getting cars to the dealers and getting them in showroom condition.

Now let's see how this sort of analysis can be used, if we adapt it slightly, for an organisation, such as a hospital, which provides a service.

ACTIVITY 9
Time guide
4 mins

Take the example of a hospital ward again. Jot down how you would define 'overheads' as they apply to a hospital ward. I've already completed 'direct costs' to get you started.

Direct costs - costs relating directly to patient care on the ward.

Overheads - _____

_____

I would have completed that by saying something like:

Overheads - costs which are incurred by the hospital as a whole.

At present it costs about £350 a week to keep a patient in hospital.

Let's have a look at a cost statement, to show us how that cost is made up.

Cost structure of Patient Care

(Cost per in-patient week)

	£	£	Examples
Direct Labour		140	- medical and nursing salaries
Direct Materials		40	- drugs, medical supplies
Prime Cost		180	
Administrative Overheads	50		- clerical salaries, rates, phone
General Hospital Overheads	120	170	- catering, cleaning costs and maintenance
Total Costs		350	

Once again we can see that the costs are broken down into

Direct Costs
Overheads

Now perhaps you'd like to try this self check to apply our analysis of costs so far.

SELF CHECK 2
Time guide 5 mins

Here is a list of some of the expenses incurred by a firm which manufactures tumble driers and electric cookers. Against each one, jot down what kind of cost you think it is.

I've done the first one to get you started.

oven doors	direct materials
wages of storemen who issue parts	_____
accountant's wages	_____
factory telephone	_____
rubber seals for tumble driers	_____
servicing the fleet of sales cars	_____
production supervisor's wages	_____
oil to lubricate production line machinery	_____
roof repairs to the factory	_____

The answer to this self check is here in the following words so you will need to check out your answers carefully. Oven doors and rubber seals for tumble driers are direct materials. Storemen's wages, the factory telephone, the production supervisor's wages, oil to lubricate production machinery and repairs to the factory roof are factory overheads. The accountant's wages are an administrative overhead. Servicing the fleet of sales cars is a selling and distribution overhead.

5 Cost Units

We've seen, then, how we can break costs down into direct costs and overheads but those costs are only useful to us if they relate to some particular thing. For example, a factory producing cars will want to identify the cost of producing a car. That is the final, finished item produced. This is called the COST UNIT.

ACTIVITY 10
Time guide
3 mins

Jot down what you think might be the cost units used by

a) a brewery

* _____

b) a cement factory

* _____

A brewery will send out its beer in barrels or kegs so the cost unit will be a barrel or a keg. (We may be more interested in beer in pints but that is a different matter!)

A cement factory will probably send its cement out by the ton so will probably use a ton of cement as a cost unit.

Cost units can equally well be used by organisations which give a service rather than making something.

ACTIVITY 11
Time guide
3 mins

We've already looked at one used by a hospital. Jot down what it was if you can remember.

* _____

Previously we mentioned the cost unit:

cost per patient week.

Other commonly used cost units in hospitals are:

cost per bed occupied

cost per out-patient visit.

ACTIVITY 12
Time guide
3 mins

Jot down what you think might be the cost units used by

a) a swimming baths

* _____

b) a school canteen

* _____

I think the swimming baths would probably use the number of bathers as a cost unit and a school canteen would use individual meals produced as a cost unit.

Relating costs to the final unit we produce enables us to make comparisons to see how well we are performing.

ACTIVITY 13
Time guide
4 mins

Think about one of the examples we have already looked at, such as a car, a meal or a barrel of beer.

What comparisons might we make which would help us to judge our performance?

Jot down one suggestion.

* _____

Perhaps you suggested:

* comparing performance over several years

* comparing actual costs with planned costs

* comparing your own costs with those of your competitors.

This list is not comprehensive and you may well have thought of other possibilities.

As well as identifying the cost of the final product or final service, you can also analyse any part of the workplace and work out appropriate cost units. For example, some of the cost units we might find in a car factory are:

final product	- cost per car
electricity cost	- cost per kilowatt hour
computing running cost	- cost per computer minutes of operation
canteen	- cost per canteen meal

Now let's see how we can compare unit costs to measure effectiveness.

ACTIVITY 14
Time guide
3 mins

John Smith, David Jones and Sarah Jackson are sales staff for the same company. They all do a lot of travelling to visit their customers. John and Sarah receive salaries and expenses of £20,000 per year. David receives £30,000. We want to measure the cost of employing these people and thus compare their effectiveness.

Jot down two possible cost units which you might use to compare the cost of employing these sales staff.

* _____

* _____

Perhaps you thought of two of these:

* calls made

* miles travelled

* the number of orders taken

* the value of orders taken

Some of these may strike you as being more useful than others but they would at least all enable you to make some comparison of how the three were performing.

Now let's suppose that, using these cost units, we have the following information available for a full year.

	Calls Made	Miles Travelled	Orders Taken (Number)	Orders Taken (Value)
John	1000	20,000	200	£200,000
Sarah	1200	20,000	150	£300,000
David	1500	25,000	250	£400,000

We already know how much they earn so it's not too difficult to produce a table like this based on unit costs.

	Calls Made	Miles Travelled	Orders Taken (Number)	Orders Taken (Value)
John (£20,000 pa)	£20 per call	£1.00 per mile	£100 per order	£0.10 per £1.00 order
Sarah (£20,000 pa)	£16.67 per call	£1.00 per mile	£133.33 per order	£0.067 per £1.00 order
David (£30,000 pa)	£20 per call	£1.20 per mile	£120 per order	£0.075 per £1.00 order

ACTIVITY 15
Time guide
3 mins

Using our analysis of costs, decide which sales person appears to be the most effective?

*

From our table it looks as though the most effective sales person may be Sarah.

Sarah has the lowest cost per call (£16.67) and the lowest cost per £ order gained (£0.067 is 6.7 pence) which makes her look the most effective. But perhaps we should also point out that we're assuming John, Sarah and David sell the same product. Some products may be harder to sell than others. It may also be that some of the areas our sales people cover are easier to sell in than others. Still, all things being equal, we can say that Sarah is the most effective sales person.

6 Cost Centres

The title of this unit is Cost Centres and we haven't even mentioned them so far. From now on, though, we'll be talking about them a lot so let's establish what they are.

* **A cost centre is a location where costs can be identified, grouped together and then finally related to the cost unit**

What do we mean by a 'location'?

It could be something like:

a department within a particular workplace

a work area

a machine or group of machines

a person - eg a hospital consultant

ACTIVITY 16
Time guide
3 mins

Jot down what you think are two advantages to an organisation of breaking down its costs into a number of cost centres.

* _____

* _____

Here are the advantages I would suggest though you may well have thought of others.

* It allows information on costs to be collected more easily

* It provides information on costs in different parts of the organisation

* Managers or supervisors of particular cost centres can be given a budget figure against which costs can be controlled.

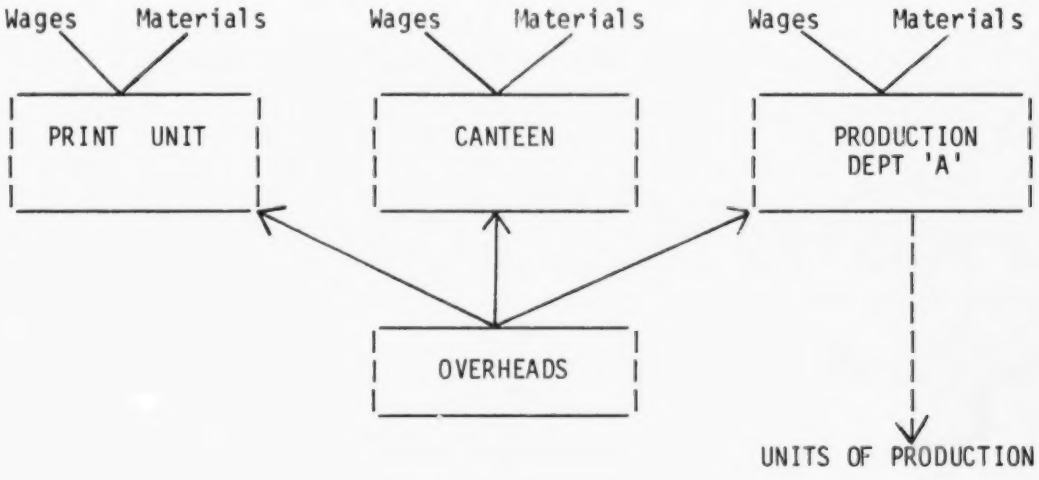
EXTENSION 2
page 77

You can find out more about how various cost centres fit into the whole system of budgetary control if you work through another unit in this series - Control Via Budgets.

* Senior management are able to compare the costs and benefits of different parts of the workplace. For instance, if the costs of running a print unit are greater than the benefits obtained then the print unit may be closed down and the printing contract given to an outside agency.

Here's a diagram to show how cost centres could operate in a particular workplace:

Cost Centres



You might reasonably wonder exactly how overheads are channelled into the cost centres and we'll be looking at that later in the unit.

For now, we can see from this diagram that costs are gathered into their appropriate cost centres and whoever supervises that cost centre has some degree of control over these costs.

In the end, <u>all</u> costs have to be transferred to a production department.

ACTIVITY 17
Time guide
2 mins

Jot down why you think all costs have to be transferred in the end to a production department.

* _____

_____

_____

We have to do that to produce a unit cost of production.

ACTIVITY 18
Time guide
3 mins

Look once more at our diagram of various cost centres then decide which two costs from the following list would not be collected directly into one of the cost centres shown in the diagram.

paper for photocopier

electricity for the whole workplace (there are no separate meters in departments)

cook's wages

machine operator's wages

rates for the entire workplace

I hope we can agree that rates and electricity for the entire workplace are not expenses of one cost centre and cannot therefore directly be collected in total by any one of our cost centres.

(Of course, if each department had an electricity meter then it would be possible to measure directly and collect directly the cost of electricity, even though it's an overhead.)

We'll come back to how overheads like rates and electricity are channelled into various cost centres later.

7 Cost Codes

A good cost system enables costs to be

* collected
* analysed
* controlled.

This means that we have to be able to find out precisely what expenses have been incurred in any part of the workplace and we have to know how much we are spending in the workplace as a whole on different sorts of expense (overtime, electricity, stationery etc).

To help us do this a system of cost codes is used.

This will mean having:

* a special code for each cost centre which will identify any costs incurred in that cost centre
* a special code for each cost or group of costs wherever they occur throughout the workplace (stationery, for instance, will have the same code wherever it occurs).

So if we combine the cost centre code (Accounts, for example) and the code identifying the type of cost (stationery, for example) we can identify how much has been spent on any particular item or group of items in any particular cost centre.

ACTIVITY 19
Time guide
5 mins

Jot down what seem to you to be three benefits of operating a cost code system.

* _____

* _____

* _____

You may have thought of a number of benefits but I think they all come back to our three key features of a good cost system:

collecting information
analysis
control.

A system of cost codes means that everybody in the workplace describes each kind of cost in the same way. This means that information about costs is simplified as far as possible and is presented in a standard way so that it is easy to interpret and analyse.

Cost codes, made up of cost centre code and type of cost code, also mean that every single cost can be traced to a certain cost centre which means that a better control can be kept.

Identifying certain kinds of expense by the same code throughout the workplace means that you can also see how much you are spending on certain things (overtime or electricity for instance) overall which will help in deciding how to make the best use of resources or in how to economise.

So now let's look at how a typical cost coding system might work.

Other people's cost codes can look a bit frightening!

1341095

for instance, would not mean much to an outsider or to somebody on their first day in a new job, but let's see how that breaks down.

Suppose your local technical college has four departments:

Business Studies	1
Engineering	2
Building	3
Catering	4

Each of those departments is a cost centre and I've filled in their cost codes alongside each one. So now we know the meaning of the first number in our sampler cost code, 1341095 - Business Studies.

Now let me fill in the rest.

	Department of Origin	Type of Attendance	Name of Course	Classification of Expenditure
	Business Studies	Day Release	Certificate in Supervisory Studies	Hire of Educational Video
Code	1	3	41	095

So we can see that 1341095 identifies the fact that we spent money on the hire of a video for a day release class in Supervisory Studies in the Business Studies Department.

ACTIVITY 20
Time guide
3 mins

Using this example to guide you, jot down three different kinds of total cost you could collect for the college as a whole if all expenditure throughout the college was coded in a similar way.

* _____

* _____

* _____

Well you could identify

* how much was being spent by the Business Studies Department

* how much was being spent on day release courses in the college as a whole

* how much was being spent on a particular type of course, such as Supervisory Studies

* how much was being spent in one department or throughout the college on hiring educational videos.

You don't just make up cost codes!

Each workplace will use certain groups of numbers to mean certain things. These groups usually contain enough spare numbers for new kinds of cost to be added to the list of codes. For instance, a workplace which starts with seven different cost centres may allocate a group of members 01 - 19 so that even though at present it only uses

01
02
03
04
05
06
07

as cost centre codes, it has plenty of room to expand.

Now let's look at another example.

Here are some cost codes for a general hospital.

Hospital Cost Centres (examples)	Codes	Items of Expenditure	Codes
Ward 1	001	Nursing Sister's Salary	025
Ward 2	002	Staff Nurse's Salary	026
Ward 3	003	Cleaner's Wages	107
Theatre 1	098	Medical equipment	400-449
Theatre 2	099	Drugs	450-500
Pharmacy	171	Laundry assistant's wages	181
Physiotherapy Department	264	Cleaning materials	600-630
Laundry	351	Cook's wages	197
Canteen	400		

Examples

* Sister's salary on Ward 2 will be coded 002 025

* Cleaning materials for Ward 3 will be coded 003 610

(note the range indicates different codes for different types of cleaning materials)

ACTIVITY 21
Time guide
5 mins

You derive codes for the following. Where you have a range of numbers choose any one within that range.

		Code
a)	Theatre 1 staff nurse's salary	
b)	Theatre 2 medical equipment	
c)	Physiotherapy Department medical equipment	
d)	Drugs ordered for the Pharmacy	
e)	Cleaning materials ordered for the Canteen	

Obviously, since some of our codes provide a group of numbers, your suggested cost codes may not be exactly the same as mine but I hope you can see how cost codes are actually made up.

Here are the numbers I would use.

Theatre 1 staff nurse's salary	098 026
Theatre 2 medical equipment	099 404
Physiotherapy Department medical equipment	264 411
Drugs ordered for the Pharmacy	171 459
Cleaning materials ordered for the Canteen	400 627

Finally, here's a chance to do some detective work on cost codes.

ACTIVITY 22
Time guide
3 mins

Here is a list of some costs in the hospital to which cost codes have been allocated. One of them seems rather suspicious and would need to be checked out.

Which one is it?

098 107

001 026

400 457

According to these cost codes the canteen has been ordering drugs! (400 457) This sounds very unlikely and would need to be followed up.

Now try this self check to round off the first part of this unit.

SELF CHECK 3 Complete the following statements with a suitable word or group of words.
Time guide 5 mins

a) Relating costs to the final cost of what we produce enables us to make _____ so we can assess performance.

b) A _____ _____ is a location where costs can be identified, grouped and related to the cost unit.

c) A location could be a _____, a _____ or a _____.

d) A system of _____ _____ is used to simplify and standardise the recording, collection and analysis of information about costs.

e) Cost codes are usually made up of at least a code for the _____ _____ and a code for the _____ _____.

The answer to this self check is here in the following words so you will need to check out your answers carefully. a) The main purpose of relating costs to the final cost of what we produce is to make comparisons (with our performance in previous years, with planned costs and with our competitors, for instance) so that management decisions can be made on the basis of this information. b) A cost centre is a location where costs can be identified, grouped and related to the cost unit. c) The possible locations we mentioned were a department, a person or a machine or group of machines. You may well have thought of some more though. d) Cost codes simplify and standardise the recording, collection and analysis of information about costs. e) Cost codes usually comprise at least the code for the cost centre to which they relate and the code for the type of cost (for example, overtime or stationery).

8 Summary

* Managers need cost information to make proper decisions.

* Costs of any organisation can be described as being

  DIRECT

  INDIRECT or an OVERHEAD cost

* Direct costs are directly related to the individual unit produced eg raw materials.

* Overhead costs are costs of the organisation which cannot be directly attributed to any one unit of production.

* Overhead costs can be broken down into

  - Factory Overheads

  - Administrative Overheads

  - Selling and Distribution Overheads.

* Cost units identify the final costs of producing the article or providing the service.

* Cost centres are locations where costs can be conveniently identified and grouped.

* A cost coding system is used to identify every cost in the workplace.

PART B COST CENTRES AND THE SUPERVISOR

1 Introduction

We've seen that cost centres are central to any costing system and that they are convenient gathering points for costs within the workplace. Whether that cost centre is a work area, a machine or group of machines or a team of people, it could well be you, as supervisor, who is responsible for maintaining the cost centre. You might have to:

* requisition materials
* authorise and collect time sheets
* control the level of costs in your work area.

2 Product Costing

ACTIVITY 23
Time guide
2 mins

Jot down what we said was the main reason for gathering information on costs.

*

Perhaps you used words like 'making comparisons' and 'decision making'.

The main reason for gathering information about costs is so that you can compare your performance against some kind of standard and use this knowledge to help in decision making.

We can identify two broad areas where cost information is essential in decision making:

* Product Costing
* Budgetary Control.

EXTENSION 2
page 77

Budgetary control is examined in detail in another unit in this series - Control via Budgets.

All we need to say here is that cost centres (departments, perhaps) will have certain budgeted costs against which actual costs are compared. Within each cost centre, managers and supervisors are responsible for controlling costs so that, as far as possible, actual costs correspond with budgeted costs.

If actual costs turn out to be greater than what was planned, you will have to explain the difference (or variance, as it is usually called) to your manager. (And, of course, if you manage to keep actual costs lower than your budgeted costs then your manager will be interested to know how you did it!)

Clearly, it's important to know precisely what it costs to produce a certain item in the workplace.

ACTIVITY 24
Time guide
3 mins

Jot down two reasons why it's important to know the cost of producing something or of offering a service.

* _____

_____

* _____

_____

There are a number of reasons. Here are three suggestions of mine but you may well have thought of more.

* So that you make the right decision on what price to charge.

* So that you know whether you are making a profit or a loss.

* So that you know the value of any stock you are holding.

Calculating the cost of what you produce is called

PRODUCT COSTING

and, although precisely how it is done varies from one workplace to another, there are basically two main systems of product costing.

They are:

* Job Costing

* Process Costing.

2.1 Job Costing

Job costing is used in industries where single units or small batches are produced. Shipbuilding would be one example where job costing would be used. Costs would be collected in the various cost centres in the ship yard and then transferred to a

UNIT OF PRODUCTION

in this case, the ship being built.

ACTIVITY 25
Time guide
3 mins

Jot down two more examples of industries where you could use job costing because you have an easily identifiable single unit of production to which you can transfer costs.

* _____

* _____

Of course, there are many examples and it is unlikely that we have chosen the same ones. Here are my suggestions to compare with yours.

* Motor car manufacture

* House building for a one-off house

2.2 Process Costing

Process costing is used in industries where you have mass production of identical units and it is not really possible or worthwhile to identify costs against an individual unit. For example, a company manufacturing chemicals on a continuous process has no single unit of production to which to transfer costs.

In this case, costs are collected into cost centres but are then transferred to the entire process rather than to a single unit of production.

ACTIVITY 26
Time guide
3 mins

Suppose you want to know the cost of producing a ton of a certain chemical. You know the cost of the entire manufacturing process and you know how much you produce. How would you calculate the cost per ton of your product?

(Look back to what we said about cost units in PART A if you're not sure.)

* _____

_____

I hope we can agree that you would have to divide all the costs transferred to the manufacturing process in a certain period by however many tons you produced in that period.

As we saw in PART A, these principles of costing work just as well in a service industry where you are doing something for your customers rather than producing goods for them. The same is true of job and process costing - they don't just apply to shipbuilding and chemical manufacture.

ACTIVITY 27
Time guide
3 mins

Remember that, to use job costing, you must have a single unit of production to which costs can be transferred.

Jot down two examples of service industries where you could use job costing.

* _____

* _____

Once again, there are dozens of different examples we could use. Here are my suggestions:

* car repairs

* medical care

* painting and decorating houses

* providing a training course.

Perhaps you were surprised to see 'medical care' on my list. In a garage, the costs of the various cost centres can be transferred in the end to the single 'end product', the car being repaired. In the same way, costs from various cost centres in a hospital can be transferred to the individual patient being treated. This is especially true in a private hospital where the patient will actually have to pay the bill for his treatment.

ACTIVITY 28
Time guide
3 mins

Remember, you use process costing where it is only possible or practical to transfer costs to an entire process rather than to a single unit of production. Jot down two examples of service industries where process costing would be appropriate.

* _____

* _____

Perhaps you found that a bit harder to think of some examples. Here are my suggestions:

* cheque clearing in a bank

* insurance premium handling

* a fast food service eg a hamburger stall.

The costs of clearing a cheque, processing a single insurance premium or providing one hamburger must be an average of the entire process - it wouldn't be possible or worthwhile to try to trace the costs involved to the individual cheque, insurance premium or hamburger.

SELF CHECK 4
Time guide
4 mins

Complete the following statements with a suitable word or group of words.

a) Information about costs is essential to make decisions about _____ _____ and _____ _____.

b) Each cost centre has a _____ to act as guidelines on spending and as a standard against which to measure performance.

c) Calculating the cost of what you produce is called _____ _____.

d) Job costing is used in industries where _____ _____.

e) Process costing is used in industries where _____ _____.

The answer to this self check is here in the following words so you will need to check out your answers carefully. a) You need information about costs to make decisions about product costing and budgetary control. b) Each cost centre has a budget which acts as guidelines on spending and as a standard against which to measure performance. c) Calculating the cost of what you produce is called Product Costing. The two main systems of Product Costing are Job Costing and Process Costing. d) Job Costing is used in industries where costs can be transferred to a single unit of production. e) Process Costing is used in industries where it is only possible to transfer costs to a process rather than to a unit of production.

Whether you use job or process costing, the costs of a product or service always fall into three groups which we identified in PART A.

ACTIVITY 29
Time guide
3 mins

To refresh your memory, jot down the three categories into which all costs can be divided.

* _____

* _____

* _____

The three categories into which costs can be divided are

* materials

* wages

* overheads.

Now let's look at how materials and wages costs are collected in appropriate cost centres and how these costs are applied to the units produced in the workplace.

The collection and application of overhead costs is rather more complex and we'll look at that separately in Part C.

3 Cost Centres and Material Costs

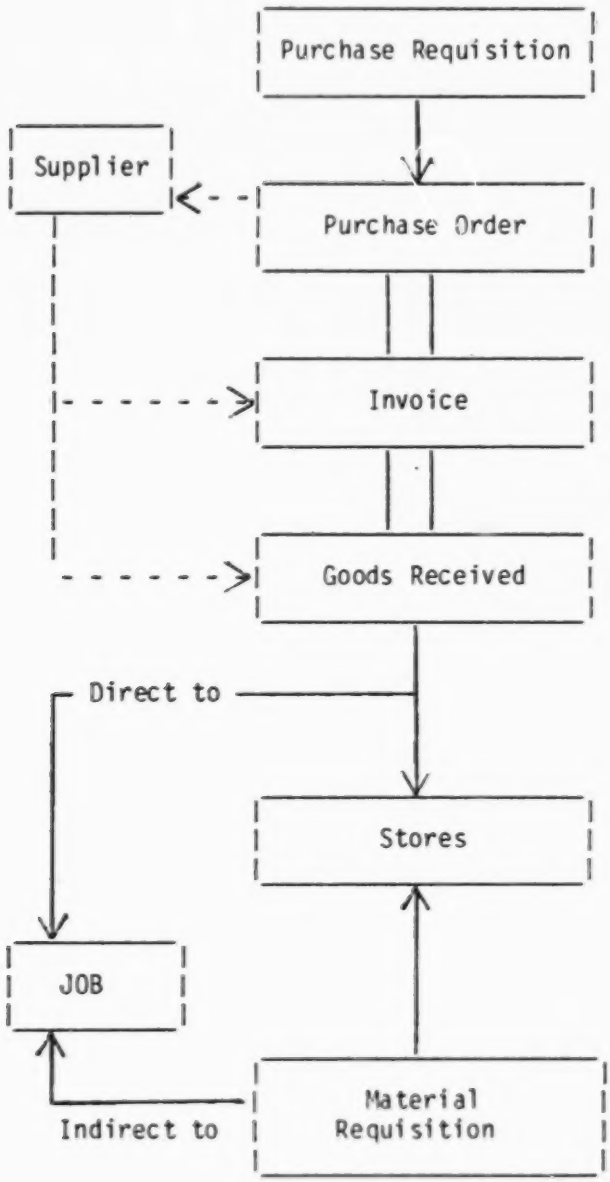
The material cost of any product will come:

* from purchases bought directly from an outside supplier

or

* from stock issued from the workplace stores.

A diagram might help to show how material costs are collected and the supervisor's role in the process.



* The process is begun either by the stores controller ordering for stores or by cost centre supervisor requisitioning materials directly for the production required.

* The actual ordering will usually be outside the scope of the supervisor and will be done in a in a purchasing/accounts department.

* The goods will be received in the goods-in department and a goods received note produced which will be checked and "married" against the invoice and a copy of the purchase order.

* The supervisor will usually have the important task of requisitioning materials from stores for the job or jobs he is responsible for.

EXTENSION 3
page 77

If you need to know more about how goods are taken into stores and issued to various departments in the workplace, you might find it useful to work through another unit in this series - Stores Control.

ACTIVITY 30
Time guide
4 mins

Look at that diagram again and then, assuming you are a production supervisor, jot down three responsibilities which you would have for obtaining and control of materials.

* _____

* _____

* _____

I think you might have these responsibilities:

* raising a purchase requisition for goods needed directly for the job

* raising a materials requisition for goods in the store which you needed for the job

* the control and security of materials once they were in your work area.

ACTIVITY 31
Time guide
5 mins

Look at the diagram again and jot down three other people or departments who have a part to play in the material costing system.

Against each one jot down briefly what you think their responsibilities are.

* _____

_____

* _____

_____

* _____

_____

Here is my breakdown of the roles various departments play in the material costing system for you to compare with yours.

DEPARTMENT	RESPONSIBILITY
PURCHASING	ordering goods
	keeping lists of approved suppliers
	checking suppliers' prices
GOODS INWARD DEPARTMENT	receive goods
	check quality and quantity of goods supplied
	issue goods received note to Accounts Department
STORES DEPARTMENT	storage and care of goods in store
	keeping records of receipts and issues to and from stores and current balances of all items in stores
	issuing purchase requisitions when stock levels fall to re-order level
	issuing supplies for certain jobs on receipt of a proper materials requisition note.

A typical materials requisition note would look like this although, of course, they vary in minor details from one workplace to another.

Material Requisition Note

Date Required 1.7.86 Cost Centre Assembly Shop

Job Number 41

Description	Item Code	Quantity	Unit Cost	Amount
Copper Brackets	A 468	30	£15.00	£450.00

Signature of Requisitioning Manager/Supervisor A N Body Date 25.6.86

ACCOUNTING/COSTING DEPARTMENT (in a large workplace these would normally be separate departments)	receiving and checking invoices against orders and goods received notes
	keeping accounting records for the entire workplace
	paying the supplier
	costing materials for particular jobs
	entering cost details on cost sheets

You probably wouldn't have guessed that last item from our diagram unless you have already gained some experience of costing in your job. Let's have a look in a little more detail at what is involved.

Let's see what happens first of all when goods are ordered specifically for a certain job.

The procedure is then, basically, like this:

- goods are requisitioned by the supervisor
- goods are ordered by the Purchasing Department
- goods are received and, after checking, arrive on the job
- the invoice is received in the Accounts Department
- the invoice is coded to a particular job
- the cost of materials is charged against the job
- the details are entered on a job cost sheet (the record of costs of each job).

I hope we can agree that this is relatively straightforward. Life gets more complicated when goods are ordered from stores which are already holding supplies of what you want. How much ought to be charged then?

Let's have a look at the following situation to show you what I mean.

Here is an extract from a stores record for copper brackets. It shows how much is in the store at the beginning of the year and how much is received and how much they cost during the year.

We've also shown how many brackets were issued but we can't put a cost figure to that yet.

Jan 1	Balance in Store	10 units at £10.00 each
March 1	Receive	30 units at £15.00 each
April 1	Issue to Job 40	10 units
June 1	Receive	20 units at £20.00 each
July 1	Issue to Job 41	30 units
Sept 1	Receive	20 units at £25.00 each
Nov 1	Issue to Job 42	10 units

ACTIVITY 32
Time guide
2 mins

Jot down how you suggest brackets should be costed to the three jobs shown in this list.

*

Here are the three main methods used to charge materials out to a job. Perhaps your suggestion fits in with one of them.

* First-in First-out (called FIFO for short)

With this method the earliest price of the materials in stock is the first to be charged out until all the materials bought at that price have been used up.

Here is how materials for the three jobs on our list would be costed using FIFO.

Job 40 10 units will be charged at £10.00
Material Cost = £100.00

Job 41 30 units will be charged at £15.00
(ie £15.00 is an earlier price than £20.00)
Material Cost = £450.00

Job 42 10 units will be charged at £20.00
(ie £20.00 is an earlier price than £25.00)
Material Cost = £200.00

* Last-in First-out (called LIFO for short)

With this method the latest price of the materials in stock will be the first to be charged.

ACTIVITY 33
Time guide
5 mins

Let's see what happens to the costing of materials using LIFO.

Complete the following costing which I've started for you.

* Job 40 10 units at £15.00 = £150.00

* Job 41 20 units at £20.00
10 units at £15.00 = _____

* Job 42 10 units at _____ = _____

Here is how I would complete that costing to compare with your figures.

Job 40 10 units at £15.00 = £150.00

Job 41 20 units at £20.00
10 units at £15.00 = £550.00

Job 42 10 units at £25.00 = £250.00

* Average cost

You can also charge material costs by calculating the latest average prices of materials in stock and charging that for all materials of that kind which you issue.

SELF CHECK 5
Time guide
4 mins

Decide whether each of the following statements is TRUE or FALSE.

a) Placing orders for materials is usually done by the Costing Department. TRUE/FALSE

b) A supervisor's responsibility for obtaining and controlling materials is to fill in purchase requisitions and materials requisitions accurately. TRUE/FALSE

c) FIFO means that you charge materials out at the earliest price paid for materials currently in stock. TRUE/FALSE

d) LIFO means that you charge out materials at the average price paid for materials currently in stock. TRUE/FALSE

The answer to this self check is here in the following words so you will need to check out your answers carefully. a) This statement is false. Purchase orders are normally made by the Purchasing Department. b) I think this statement is false. I don't mean to suggest that the supervisor hasn't a responsibility for filling in requisitions accurately! However, a supervisor's responsibility for materials also extends to the control and security of materials once they have been drawn from stores and are in the work area for which the supervisor is responsible. c) This statement is true. FIFO means First-In First-Out and means that you issue goods in the order they are received and charge them out at the earliest price paid for goods which are currently in stock. d) LIFO means Last-In First-Out and means that you charge out at the most recent price paid for goods in stock, so this statement is false.

4 Cost Centres and Labour Costs

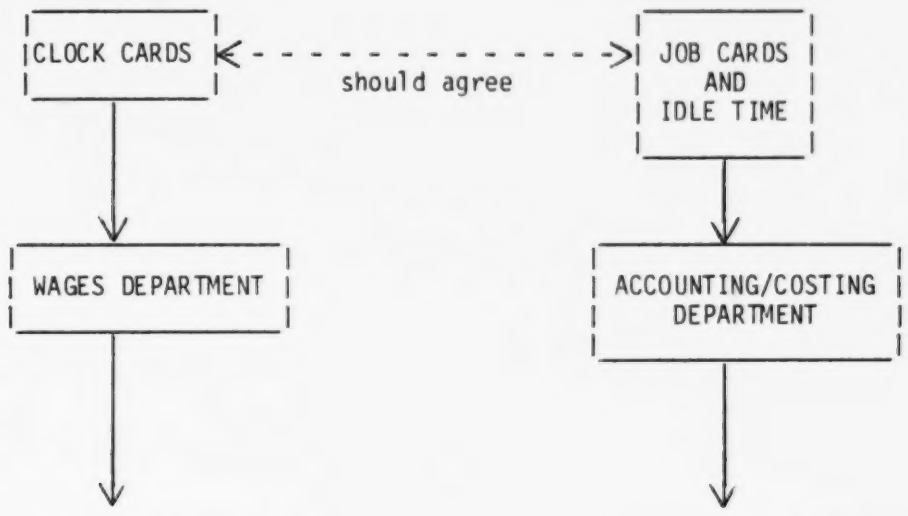
As a supervisor, you are likely to be directly involved in the control and recording of labour costs. Being a supervisor gives you a degree of authority over your workteam and gives you the responsibility for

* controlling timekeeping
* controlling quality of performance
* recording time spent on individual jobs
* passing time records to the appropriate department for analysis.

Other departments which will be involved to some extent in the labour costing system are:

* Timekeeping Department
* Wages Department
* Accounts/Costing Department
* Personnel Department

Here's a diagram which shows how a labour costing system could work.



Now let's look at various aspects of such a labour costing system, especially at the role of the supervisor.

We'll start with the Timekeeping Department.

Where such a function exists, it will be responsible for the accurate and honest operation of the clock card system and for passing the information from the clock card to the Wages Department.

A typical clock card may look something like this.

CLOCK CARD

NAME A Worker EMPLOYEE NO 740

DEPARTMENT (COST CENTRE) ASSEMBLY SHOP WEEK ENDING 25/6

DATE	AM		PM		EXCESS HOURS		TOTAL HOURS
	IN	OUT	IN	OUT	IN	OUT	
21/6	7.58	12.01	1.00	5.01			8.00
22/6	7.55	12.00	1.00	5.05			8.00
23/6	8.00	12.00	1.00	5.00	6.00	9.00	11.00
24/6	7.55	12.00	1.00	4.55			8.00
25/6	7.59	12.01	1.02	5.00			8.00

This has to be analysed before being passed to the Wages Department.

ACTIVITY 34
Time guide
5 mins

Using the information on our example of a clock card, fill in the blank spaces on the analysis below.

Regular time _____ hours at £6.00 _____

Overtime premium _____ hours at £3.00 _____

Gross Earnings £_____

I hope we can agree on the following figures:

Regular time 43 hours at £6.00 258.00

Overtime premium 3 hours at £3.00 9.00

Gross Earnings £267.00

Perhaps from your own experience at work you're now saying to yourself 'Not all workplaces have clock cards with people clocking in and out and not all workplaces have separate time keeping departments'.

You would be quite right.

If you don't have clock cards you probably have time sheets, certainly for overtime, which, as supervisor, you have to verify before they are sent off to the Wages Department.

So the supervisor is usually directly responsible for confirming that the time sheets, the records of how the workteam's time has been spent, are true.

But the supervisor's responsibilities for labour cost control don't end here.

ACTIVITY 35
Time guide
3 mins

Job down two further responsibilities for labour cost control which a supervisor might have.

* _____

* _____

Depending on what happens in your workplace, you may have thought of a number of possibilities.

Typical responsibilities would include:

* allocating time to individual jobs

* controlling the amount of time spent on individual jobs by members of the workteam

* keeping idle time to a minimum.

To these we can add the 'paperwork responsibilities' which go with the job:

* verifying job costs (confirming that details shown on job cards are correct)

* passing job costs to the Costing Department for analysis

* verifying idle time costs

* passing details of idle time costs to the Costing Department.

The Job Card, or Work Ticket as it is sometimes called, is the key document in transferring labour cost information from a particular work area to the Costing Department.

It's important that the information shown on the various documents which relate to labour costs balances.

ACTIVITY 36
Time guide
2 mins

Suppose the total time shown on a Work Ticket is 35 hours.

The total time recorded on the corresponding Time Sheet is 40 hours.

Which document would you look at to find the missing 5 hours?

* _____

I hope we can agree that you would look at the records of idle time to find the remaining five hours.

Time shown on Work Tickets	+	Time shown on Idle Time Cards	=	Time shown on Time Sheets or Clock Cards.

The design of work tickets obviously varies from one workplace to another but this example shows you the most important features.

WORK TICKET

Employee No	740	Date	22/6	Job No	41
Operation	Drilling	Account	Work in progress	Dept.	Assembly Shop
Time started	4.00	Rate	£6.00	Pieces:	
Time Completed	4.45	Amount	£4.50	Worked	20
				Rejected	-
				Completed	20

Signed A Worker

Verified A N Body (Supervisor)

ACTIVITY 37
Time guide
3 mins

How long did the workteam member spend on Job 41?

* _____

How much did he get paid for Job 41?

* _____

You probably worked out quite easily that Job 41, to which this work ticket relates, took 45 minutes and, since the hourly rate for the job is £6.00, the workteam member will be paid £4.50.

Now let's have a look for a moment at the question of idle time.

ACTIVITY 38
Time guide
2 mins

Jot down what seem to you to be three likely causes for idle time.

* _____

* _____

* _____

Perhaps you felt that you could produce a list as long as your arm!

Common causes are:

* machine breakdown
* power failure
* waiting for work to be scheduled
* waiting for materials or tools
* waiting for instructions.

Idle time is not normally charged directly against the job but is regarded as a production overhead. However, if the fault can be traced to one particular department it may be charged against that department.

For instance, suppose a maintenance programme, scheduled to be completed during the fortnight in July when the factory is shut down, runs late and production time is lost once everybody is back at work.

It seems obvious that in this case the fault can be traced back to the Maintenance Department and the cost will be charged to it.

In that case the supervisor in the Maintenance Department has got a lot of explaining to do.

ACTIVITY 39
Time guide
1 min

From what we've said so far, which department do you think will receive all the documents which relate to labour costs, including

clock cards
time sheets
job cards
idle time cards.

*

I hope we can agree that it is the Costing Department we're talking about.

The Costing Department has two main functions as far as labour costs are concerned:

* to maintain Job Cost Sheets for each job

* to analyse total wages between various cost centres.

Let's have a look at each of these functions in turn.

Maintaining Job Cost Sheets

Here is an extract from a summarised job cost sheet

JOB 41

Materials	1,000
Labour	1,500
Production overheads	1,200
Factory cost	3,700
Other overheads	1,300
Total cost	5,000

(We'll look at how the figure for overheads is arrived at in Part C.)

Wages Analysis

Here is a typical wages analysis sheet which shows how total wages for a certain period would be analysed between the various cost centres.

WAGES ANALYSIS

Week Commencing: 21/6

Cost Centre	Cost Code	Hours Worked	Basic Pay	Overtime	Bonuses	Total Wages
Direct Labour:						
Dept: Assembly	01					
Milling	02					
Indirect Production Labour:						
Dept: Assembly	08					
Milling	09					
Maintenance	10					
Stores	11					
Production Planning	12					
Administration	24					
Sales Office	27					
Transport Department	31					
Total						

ACTIVITY 40
Time guide
2 mins

The Wages Analysis Sheet shows a heading for direct labour.

The figures for direct labour must equal the figures shown on what documents received from the Production Department?

*

The figures for direct labour must equal the figures shown on the various job cards or work tickets received from the Production Department.

The other labour costs shown on the Wages Analysis have to be analysed so that

* overheads can be applied indirectly to the various jobs or products

* cost control of each cost centre can be maintained.

One more department is involved in the labour costing system - the Wages Department. They are not usually involved in the costing system as such but are more concerned with preparing the payroll and actually paying the wages.

However they may be responsible for:

* summarising wages costs in each cost centre

* summarising hours worked in each cost centre to allow the average wages cost in any cost centre to be calculated. This information would be useful for control and budget purposes.

EXTENSION 4 page 77 If you want to know more about the role of the Wages Department you might find it useful to work through another unit in this series - Wage Payment Systems.

SELF CHECK 6
Time guide
8 mins

Complete the following statements with a suitable word or group of words.

a) The document which shows the number of hours worked by any workteam member is the _____ _____ or _____ _____.

b) Time taken on a particular job is shown on a _____ _____ or _____ _____.

c) Job time + idle time should equal the time shown on _____ _____.

d) Unless it is excessive, idle time is usually regarded as a _____ _____.

e) The two functions of the Costing Department as far as labour costs are concerned are to _____ _____ and _____ _____.

f) An analysis of total wages in every part of the workplace means that overheads can be _____ _____.

The answer to this self check is here in the following words so you will need to check out your answers carefully. a) The clock card or time sheet shows the number of hours worked by any workteam member. b) Time taken on a particular job is shown on a job card or work ticket. c) Time spent on the job (shown on the job card) + idle time should equal the time shown on the time sheet. d) Idle time is usually regarded as a production overhead. e) As far as labour costs are concerned, the two main functions of the Costing Department are to maintain Job Cost Sheets for each job and to analyse total wages between the various cost centres. f) An analysis of total wages means that overheads can be applied indirectly to the various jobs or products.

5 Summary

* A COSTING SYSTEM must provide for:

  BUDGETARY CONTROL

  PRODUCT OR SERVICE COSTING

* PRODUCT OR SERVICE COSTING has two main systems:

  JOB COSTING

  PROCESS COSTING.

* Direct materials and direct labour costs can be collected in a cost centre and charged directly to a job.

* Overheads must also be applied to job costs.

* Supervisors have an important role in the

  CONTROL

  COLLECTION

  PASSING ON

  of data relating to material and labour costs.

* The Costing Department gathers cost data from key documents supplied by supervisors and draws up a COST STATEMENT for each job.

PART C COST CENTRES AND OVERHEADS

1 Introduction

We've looked at the supervisor's role in collecting, controlling and passing on information about direct costs. Now let's look at how overhead costs affect the control of costs within the cost centre and how they affect the final cost of the product or service which your workplace provides.

2 Overheads

SELF CHECK 7 Jot down briefly what 'overheads' means.
Time guide
2 mins

Perhaps you used different words from me but I hope we can agree that overheads are those costs which cannot be directly related to the final unit of production.

They are usually divided into three groups:

Production Overheads

Administration Overheads

Selling and Distribution Overheads

However you divide them up, though, overhead costs are always identified with a particular cost centre and are collected into that cost centre.

The first problem we come across with overheads is that some overheads belong entirely to one cost centre whilst some can be shared among several cost centres.

Let's look at that in more detail.

3 Allocation of overheads

Where an overhead can belong entirely to one cost centre we say that it is ALLOCATED to the appropriate cost centre. The supervisor or manager of that cost centre will bear the responsibility for controlling these overhead costs within the cost centre.

ACTIVITY 41
Time guide
3 mins

Think of two overhead costs from your own workplace which could be allocated entirely to one cost centre.

It's unlikely that we've thought of the same things but here are a couple of examples which spring to my mind:

* wages of supervisor in the food hall of a large hypermarket will be allocated to the food hall cost centre.

* the cost of an advertising promotion will be allocated to the marketing cost centre.

ACTIVITY 42
Time guide
3 mins

Here are some more overhead costs, similar in that they can be allocated entirely to individual cost centres. Against each one, write down which of our three classes of overheads it belongs to - Production Overheads, Administration Overheads or Selling and Distribution Overheads.

* Wages of supervisors working entirely within a particular production department.

* Paint, oil and grease used in a certain production department.

* Wages of typists in the typing pool.

* Travelling expenses of salesmen.

I hope we can agree that the first two costs are production overheads, the typing pool typists' wages are an administrative overhead and the salesmen's travelling expenses are a selling overhead.

Each of these could be allocated directly and entirely to one cost centre whether it is a production department, the typing pool or the sales department.

4 Apportionment of overheads

Often, though, overhead costs have to be spread over a number of cost centres. These costs are controlled first of all in one cost centre and then APPORTIONED between other cost centres using an agreed method of deciding how they should be shared out or apportioned.

Here are some overhead costs which might be apportioned among various departments. I've also shown the cost centre where the cost would initially be controlled and suggested a possible method for apportioning the cost between departments.

Type of Cost	Cost Centre where cost is initially controlled	Possible method of of apportionment
Rent and rates	Property Manager	Square footage occupied by various departments
Lighting and Heating	Plant Engineer	Volume occupied by various departments
Insurance of equipment	Company Secretary	Volume of equipment in various departments

ACTIVITY 43
Time guide
5 mins

Here are three more overhead costs which need to be apportioned. In the space provided jot down which cost centre you think should initially control each one and suggest a method by which they could fairly be apportioned.

Type of Cost	Cost Centre where cost is initially controlled	Possible method of of apportionment
Staff welfare expenses		
Advertising for staff		
Building repairs		

Here are my suggestions. It's quite possible that you have thought of other equally reasonable suggestions so don't feel that our answers have to be the same.

Type of Cost	Cost Centre where cost is initially controlled	Possible method of of apportionment
Staff welfare expenses	Personnel Manager	Number of staff per department
Advertising for staff	Personnel Manager	Number of vacancies notified per department
Building repairs	Building and Works Manager	Floor area per department

You can perhaps see from this activity that there is no hard and fast method of apportioning overheads and there is quite a bit of room for disagreement about how it should be done.

Where possible it is preferable to allocate overheads directly to cost centres rather than to apportion them between cost centres.

ACTIVITY 44
Time guide
8 mins

Z Limited owns a small factory which produces electronic toys. The factory is divided into two production units A and B and has two service departments, Stores and Maintenance.

Let's suppose that £100,000 of overheads can be allocated in the following way:

Production Department A	£ 45,000
Production Department B	£ 30,000
Stores	£ 10,000
Maintenance	£ 15,000

The factory also has a yearly rates bill of £15,000 and a yearly heating and lighting bill of £15,000, and these are overheads which must be apportioned.

The factory area is divided in the following proportion:

Production Department A	50%
Production Department B	30%
Stores	10%
Maintenance	10%

The factory volume is divided in the following proportion:

Production Department A	50%
Production Department B	35%
Stores	5%
Maintenance	10%

Now let's work out what the total overheads would be for each cost centre.

Fill in the blanks in the following calculations.

	Total Overheads			
	Prod A	Prod B	Stores	Maintenance
Allocated overhead	45,000	30,000	_____	_____
Apportioned rates	50% x £15,000	30% x £15,000	__% x £15,000	__% x £15,000
	7,500	_____	_____	_____
Apportioned heating & lighting	50% x £15,000	35% x £15,000	__% x £_____	__% x £_____
	_____	_____	_____	_____
TOTAL	60,000	39,750	_____	_____

Here is how I would complete that table for you to compare with your own results.

Total Overheads

	Prod A	Prod B	Stores	Maintenance
Allocated overhead	45,000	30,000	10,000	15,000
Apportioned rates	50% x £15,000	30% x £15,000	10% x £15,000	10% x £15,000
	7,500	4,500	1,500	1,500
Apportioned heating & lighting	50% x £15,000	35% x £15,000	5% x £15,000	10% x £15,000
	7,500	5,250	750	1,500
TOTAL	60,000	39,750	12,250	18,000

You can see from this that if you were, for instance, a production supervisor or a maintenance supervisor, costs will be charged against your departmental budget even though they may be things over which you have no direct control.

5 . Transferring Overheads

Now let's see how overheads affect the cost of the product or service your workplace offers.

ACTIVITY 45
Time guide
2 mins

We have said already that to work out a cost for your product or service, all costs have finally to be transferred to the departments which actually produce the goods or carry out the service.

Suggest to which department or work area costs might finally be transferred in these two examples.

* In a factory manufacturing electronic toys.

---

* In a garage which services cars.

We may not have used quite the same names for the departments concerned but I hope we can agree that, finally, costs in the toy factory have to be transferred to the production department and, in the garage, costs have to be transferred to the repair shop floor since this, rather than stores for example, is where the actual service to the customer takes place.

For the purposes of budgetary control we will have collected costs in a number of cost centres throughout the workplace but for product or service costing we must transfer them to production centres.

Making this transfer can be quite complex but, put simply, you transfer overheads from service departments to production departments according to how much work or time has been given by the service department to the production department.

So Stores (a service department) may transfer their costs to production departments on the basis of the number of material requisitions made.

ACTIVITY 46
Time guide
2 mins

Suggest how another service department, Maintenance, might transfer its overheads to production departments.

*

Although it's not necessarily the only right answer, I would suggest that Maintenance would transfer its overhead costs on the basis of the number of hours of maintenance work done for the various departments.

Suppose, in a certain workplace, 30,000 material requisitions are made to Stores and Stores' costs amount to £12,000.

Department A makes 20,000 requisitions.

Department B makes 10,000 requisitions.

Department A, having made two thirds of the requisitions will be charged with £8,000 or two thirds of the Stores' overhead costs. Department B, having made one third of the requisitions on Stores will be charged with one third of the Stores' overhead costs or £4,000.

ACTIVITY 47
Time guide
5 mins

Suppose the Maintenance department does 5,000 hours work for department A and 1,000 hours for department B - a total of 6,000 hours. Maintenance department overhead costs are £18,000.

How much will be charged to Department A and Department B from the Maintenance Department?

Department A $\frac{5}{6}$ x £18,000 £ _____

Department B _____ x £18,000 £ _____

I hope we can agree that £15,000 will be transferred from Maintenance to Department A and £3,000 will be transferred to Department B.

In the last few activities we have gradually built up a picture of costs in our electronic toy factory. If we pull all our calculations together we can see that the final overhead costs in Department A and Department B look like this:

Department A

	£
Original allocation and apportionment	60,000
From Stores	8,000
From Maintenance	15,000
Total	83,000

Department B

	£
Original allocation and apportionment	39,750
From Stores	4,000
From Maintenance	3,000
Total	46,750

Given this information, each production department can now produce the kind of cost statement we looked at in Part A.

Here is the sort of thing I mean, just to refresh your memory:

Direct Materials	20.00
Direct Labour	30.00
Prime Cost	50.00
Production overheads	25.00
Total Factory Cost	75.00

(Don't worry about where these figures come from! They are just an example of a cost statement. The point is that now I hope you can see where that figure for production overheads actually came from and how such a figure is arrived at.)

ACTIVITY 48
Time guide
2 mins

We've seen how a total production overheads figure can be arrived at in any one production department. How would you work out how much production overheads ought to be added to the cost of each unit produced? Jot down your suggestion.

*

We might explain this in a number of ways but I hope we can agree that you have to know or estimate how many units are going to be produced and then divide the total production overhead costs by the number of units forecast to be produced.

Administration and selling costs would be added on separately.

I hope you've found that this sounds fairly straightforward and sensible.

If only, in practice, it was that simple!

We still have two related problems to deal with.

ACTIVITY 49
Time guide
3 mins

Production overheads would include things like the cost of electricity billed at the end of each quarter and the cost of maintenance - perhaps when fitters are called out unexpectedly in an emergency.

Using these two examples as a hint, try to jot down one problem we may have in calculating production overheads as part of the total factory cost.

*

Perhaps you said something along the lines that you may not necessarily know what overheads are going to be until the end of a certain period. We don't know how much the quarterly electricity bill will be until we get it and we can't predict the cost of unexpected maintenance or repairs.

Another problem is that, even when overhead costs are known for a particular period, they may occur irregularly so we can't be sure that they reflect the true long run cost of making the product or offering the service.

Let me show you what I mean.

Let's go back to Z Ltd, the electronic toy manufacturer.

They produce 1,000 toys a month and the prime cost of each toy is £10.00.

Overhead costs for the first three months of the year are as follows:

January	£20,000
February	£ 1,000
March	£10,000

The factory production cost per toy for January would be:

		£
Prime cost		10.00
Factory overheads	£20,000 / 1,000	20.00
Total Factory cost		30.00

ACTIVITY 50
Time guide
3 mins

What would be the total factory cost per toy for February and March?

		£
February - Prime Cost		10.00
Factory overheads	£1000 / 1000	____
Total Factory Cost		____
March - Prime Cost		10.00
Factory Overheads	£____	____
Total Factory Cost		____

I hope we can agree that the total factory cost per toy for February is £11 and for March, £20.00.

It wouldn't be very helpful to say it costs £30.00 to produce a toy one month and £11.00 the following month.

To overcome this problem and the fact that many overhead costs are simply not know until the year end, we need some other method to include overheads in the cost of the product.

REFERENCE 2
page 78

Charles Horngren, a famous and influential American accountant, in tackling this problem says that we need to determine what could be called a normal cost rather than using an actual cost to calculate overheads because the overhead content is based on estimates or what we think will happen rather than on knowing what is actually the case.

We need to base overhead costs on budgeted estimates of total overheads for a year divided by an estimate of total activity for the same period. In other words, we need to plan for how much overheads are likely to be, estimate how much business we are likely to do and divide one by the other.

How to you measure activity?

You can do it in any number of ways, for instance:

units produced
labour hours worked
machine hours worked
labour cost
prime cost.

Let's seen how that works out in practice.

The first stage is:

* Estimate total overheads for the year.
Just as an example, we'll say £500,000

Next we have to:

* Estimate the level of activity.
We'll say units produced 100,000

Next stage

* Divide total overheads by the level
of activity £500,000
100,000

So the total overheads cost per unit is £5.00 and we have to add that to the cost of every unit produced to cover factory overheads.

This method of charging or absorbing overheads into the cost of production is appropriate where one type of product is made. Where a variety of products are made one of the other measures of activity, such as labour hours, will have to be used instead.

Let's see how that would work out.

ACTIVITY 51
Time guide
2 mins

Factory Y makes jeans and its output is 5,000 pairs per week. The direct labour cost, taken from the time sheets, is £9,750.

Work out the direct labour cost per pair of jeans.

*

Here are my calculations to compare with yours.

$$\frac{\text{Direct Labour cost per week}}{\text{Weekly output}} = \frac{9750}{5000} = £1.95$$

SELF CHECK 8
Time guide
2 mins

Jot down the name of the record from which the cost of direct materials could be taken.

*

Direct materials costs would come from material requisitions.

ACTIVITY 52
Time guide
2 mins

Now let's suppose that:

Materials costs per week were £15,000.

Jot down the direct materials cost of a pair of jeans.

*

The materials cost of a pair of jeans would be:

$$\frac{\text{Direct materials cost per week}}{\text{Weekly output}} = \frac{£15{,}000}{5{,}000} = £3.00$$

We can summarise our costs so far like this:

Cost of jeans:	Labour	£1.95
	Material	3.00
	Prime cost	£4.95

Now let's suppose the total factory overheads for the year are estimated at £500,000 and estimated production is 250,000.

The overhead cost per pair of jeans will be

$$\frac{£500{,}000}{250{,}000} = £2.00$$

So each time a pair of jeans is made a further £2.00 is added to cover overheads.

ACTIVITY 53
Time guide
4 mins

Here is our cost statement so far.

Complete it to show the total factory cost of a pair of jeans.

	£
Direct Labour	1.95
Direct Material	3.00
Prime Cost	4.95
Total Factory Cost	

The final cost statement should look like this:

	£
Direct Labour	1.95
Direct Material	3.00
Prime Cost	4.95
Factory Overheads	2.00
Total Factory Cost	6.95

(Don't forget that, in practice, we would still have to add on something to cover administration and selling costs before we had the final cost of production.)

Now then - one last complication which will make our example more complex but also more realistic. This time we'll assume we have two products and two separate production departments.

Here's quite a bit of information you'll need to refer to as we work through this example.

FACTORY Y

Products: jeans and denim jackets

Production departments: Cutting
Sewing

* Labour cost in cutting department is £2.00 per hour.

* Labour cost in sewing department is £3.00 per hour.

* Jeans require 1 hour cutting and ½ hour sewing.

* Denim jackets require 1 hour cutting and 2 hours sewing.

* Jeans require ½ hour machining in sewing department.

* Denim jackets require 1½ hours machining in sewing department.

* Material costs will be £3.00 per pair of jeans and £2.00 per denim jacket.

* Total overheads are estimated to be £500,000.

* By the various processes of allocation and apportionment described earlier £300,000 'belongs' to cutting department
£200,000 'belongs' to sewing department.

* Estimated production - 250,000 jeans.
50,000 jackets.

There's quite a lot of information there to take in and you may need to refer back to it from time to time.

Let's start by deciding how to deal with overhead costs. With two separate departments and two products we can't use one unit of production as a means of measuring and estimating the level of activity.

ACTIVITY 54
Time guide
3 mins

Here are the ways of estimating levels of activity which we looked at before.

* units produced
* labour hours worked
* machine hours worked
* labour cost
* prime cost.

Jot down which you would use to estimate levels of activity in:

the Cutting Department _____

the Sewing Department _____

I think I would use direct labour hours in the Cutting Department and machine hours in the Sewing Department though this isn't necessarily the only way of doing it.

Now we know that the Cutting Department has £300,000 of estimated overheads. But how many labour hours can we estimate?

ACTIVITY 55
Time guide
2 mins

Using the information you have about production in Factory Y, work out how many labour hours we can estimate for the Cutting Department.

* _____

_____

We know the estimated level of production for both products and the length of time each product needs.

Jeans

250,000 x 1 hour = 250,000 hours of labour.

Jackets

50,000 x 1 hour = 50,000 hours of labour.

So the total estimated labour hours in the cutting department is 300,000 hours.

So we know that the allowance for overheads should be:

$$\frac{\text{estimated overheads}}{\text{estimated labour hours}} = \frac{£300,000}{300,000} = £1 \text{ per labour hour.}$$

In other words, every time 1 hour of work is carried out in the Cutting Department, £1.00 has to be added to the costs to allow for estimated overheads.

ACTIVITY 56
Time guide
5 mins

Here is the information we need to know about production in Factory Y.

Using what you need from this information, work out the rate to cover overheads in the Sewing Department using machine hours as the measure of levels of activity.

FACTORY Y

Products: jeans and denim jackets

Production departments: Cutting
Sewing

* Labour cost in cutting department is £2.00 per hour.
* Labour cost in sewing department is £3.00 per hour.
* Jeans require 1 hour cutting and ½ hour sewing.
* Denim jackets require 1 hour cutting and 2 hours sewing.
* Jeans require ½ hour machining in sewing department.
* Denim jackets require 1½ hours machining in sewing department.
* Material costs will be £3.00 per pair of jeans and £2.00 per denim jacket.
* Total overheads are estimated to be £500,000.
* By the various processes of allocation and apportionment described earlier £300,000 'belongs' to cutting department
  £200,000 'belongs' to sewing department.
* Estimated production - 250,000 jeans.
  50,000 jackets.

Estimated Overheads in Sewing Department £ _____

Estimated output x machine hours -

Jeans = _____ x _____ = _____

Jackets = _____ x _____ = _____

_____

Total machine hours = _____

Allowance for overheads in the Sewing Department = £_____

_____

_____

= £ ___ per machine hour

Here is how I would complete that calculation.

Estimated overheads in Sewing Department £200,000

Estimated output x machine hours:

jeans -	250,000	x ½ =	125,000
jackets -	50,000	x 1½ =	75,000
Total machine hours			200,000 hours

Allowance for overheads in the Sewing Department = £200,000 / 200,000

= £1.00 per machine hour

So every time 1 hour of machining is done in the Sewing Department £1.00 is added to cover overhead costs.

Now we've got everything we need to produce a cost statement for both products incorporating all the information we've produced so far. Here is the Cost Statement for jeans.

Cost Statement - Jeans

		£
Direct labour - cutting (1 hour x £2.00)		2.00
sewing (½ hour x £3.00)		1.50
		3.50
Direct materials		3.00
Prime costs		6.50
Overheads - cutting (1 hour x £1.00)	1.00	
- sewing (½ hour machine x £1.00)	50	1.50
Total factory cost of production		8.00

ACTIVITY 57
Time guide
1 min

In a complete cost statement for jeans, what two other items would we still have to add?

* _____

* _____

We would still have to add a further allowance for administration overheads and selling overheads to get a complete statement of what the jeans cost.

SELF CHECK 9 Here is the information you need about factory Y once more.
Time guide
8 mins Use that to help you set out a cost statement, similar to the one we've just done, for denim jackets.

FACTORY Y

Products: jeans and denim jackets

Production departments: Cutting
Sewing

* Labour cost in cutting department is £2.00 per hour.

* Labour cost in sewing department is £3.00 per hour.

* Jeans require 1 hour cutting and ½ hour sewing.

* Denim jackets require 1 hour cutting and 2 hours sewing.

* Jeans require ½ hour machining in sewing department.

* Denim jackets require 1½ hours machining in sewing department.

* Material costs will be £3.00 per pair of jeans and £2.00 per denim jacket.

* Total overheads are estimated to be £500,000.

* By the various processes of allocation and apportionment described earlier £300,000 'belongs' to cutting department
£200,000 'belongs' to sewing department.

* Estimated production - 250,000 jeans.
50,000 jackets.

Cost Statement - Denim Jackets

	£	£
Direct Labour - cutting		
sewing		
Direct Materials		
Prime Cost		
Overheads - cutting		
- sewing		
Total factory cost of production		

Here is my cost statement for you to compare with yours.

Cost Statement - Denim Jackets

		£
Direct Labour - cutting (1 hr x £2.00)		2.00
sewing (2 hrs x £3.00)		6.00
		8.00
Direct Materials		2.00
Prime Cost		10.00
Overheads - cutting (1 hr x £1.00)	1.00	
- sewing (1½ hrs x £1.00)	1.50	2.50
Total factory cost of production		12.50

I hope you have found that your figures correspond with mine and that you now have a clear idea of how costs throughout the workplace are collected into various cost centres and then transferred finally to the various products or services which you offer.

EXTENSION 5 page 77

It's quite a complex subject. If what we've said in this unit has whetted your appetite to know more I think you would find this book interesting and helpful, particularly on the treatment of overheads.

You would find it useful to have a chat with the management accountant in your workplace who can tell you in more detail how cost centres work in your particular workplace.

6 Summary

* Overheads are collected within cost centres.

  Many of them are outside the control of any one cost centre supervisor.

* Overheads which relate entirely to one cost centre are ALLOCATED.

* Overheads which do not relate entirely to one cost centre are APPORTIONED between cost centres by a suitable, agreed method.

* All overheads must eventually end up in the production department or department which provides the service for product or service costing purposes.

* Overheads cannot usually be worked out accurately at the time and have to be estimated in advance.

* An estimated level of activity is used to work out how much should be allowed for overhead costs in costing the product or service offered.

PART D PERFORMANCE CHECKS

1 End Check

Time guide 60 mins

You may review your understanding of the Unit as a whole by completing this group of questions. DON'T GUESS THE ANSWERS - if you're not sure, flick back into the Unit and check before responding.

If you are still unsure then put a question mark against your response before proceeding.

TRUE/FALSE

Respond to each statement by writing TRUE or FALSE in the space provided.

1 Direct cost is any cost that can be specifically related to the unit of production. _____

2 Prime costs are another name for wages or labour costs. _____

3 Factory rates bill would be an example of selling overheads. _____

4 All costs within an organisation can be collected within cost centres. _____

5 Job costing is a costing system used where costs can be traced to individual or small batches of products. _____

6 Material requisitions are used to order goods direct from a supplier. _____

7 Idle time is a problem always caused by poor supervision. _____

8 Products are often costed with an estimate for overheads. _____

COMPLETION

Respond by completing each sentence with a suitable word or words.

9 Selling costs are any cost incurred in securing _____ for the workplace.

10 Overheads are usually broken down into factory overheads, _____ overheads and _____ and _____ overheads.

11 A typical measure of cost within a hospital might be cost per _____ _____.

12 A good cost coding system allows expenses to be _____ into type of expense and _____ to a particular cost centre.

13 FIFO is a system for _____ issues of materials from stores to the job.

14 The original document on which wage costs of a job will be based will be the _____ _____ or _____ _____.

15 An overhead cost which can be identified to one cost centre and one alone is said to be _____ to that cost centre.

16 A major problem with overhead costs is that they are frequently _____ until the end of the accounting period.

MULTIPLE CHOICE

Respond to each question by putting a tick against the ONE answer which is most correct.

17 Total factory cost is

a) prime cost

b) prime cost + administration overheads

c) factory overheads + administration overheads + selling overheads

d) prime cost + factory overheads

18 Wages of the personal secretary to the sales manager might be classified as

a) prime cost

b) administration or selling overheads

c) factory overheads

d) prime cost or factory overheads

19 A cost centre could be

a) a department

b) a person

c) a machine

d) any of the above

20 An example of an industry where process costs could be used would be

a) shipbuilding

b) chemicals

c) construction

d) health care

21 In a material costing system the shop floor supervisor would have the following function

a) check goods in from supplier

b) price materials from store

c) raise requisitions for required materials

d) check invoices for payment

22 The supervisor could be blamed for idle time if the cause could be traced to

a) machine breakdown caused by faulty maintenance

b) the workforce waiting for instructions on how to tackle the job

c) power failure

d) a hold-up in supply of materials

23 The following method would be a reasonable approach when apportioning the overhead rent and rates

a) number of staff employed in the relevant departments

b) value of equipment in the relevant departments

c) area of the various departments

d) volume of the various departments

24 An overhead recovery rate of £5.00 per labour hour means

a) £5.00 will be added to every job to cover overheads

b) minimum price charged for labour will be £5.00 per hour

c) £5.00 is added to the cost of the job for every labour hour involved

d) £5.00 is the minimum price for the job

END CHECK - Checkout

Audio Tape Side 2 Time guide 35 mins

The answers and explanations for these End Checks are on Side 2 of our Audio Tape. Have your responses with you as you play this tape. As you listen you can check out how well you have done and make notes as you proceed.

2 Tutor Check

Time guide 60 mins

Read the following case incident, then deal with the accompanying questions.

B Simpson and Co Ltd uses a job costing system and uses a machine hour rate to recover overheads in the machining department and a direct labour hour rate in the assembly department.

The budgeted overheads in the machinery department are £40,000 and in the assembly department £64,000.

Budgeted machine hours in Machining Department 10,000 hours

Budgeted labour hours in Assembly Department 25,600 hours

Job number 762 costs £500 in direct materials and
£700 in direct labour.

It requires 20 machine hours in machining department and 200 labour hours in assembly department.

Work out the following

1 Overhead recovery rate in Machining Department and Assembly Department.

2 Total Factory cost of Job 762 showing

a) prime cost

b) factory overhead.

3 Suppose it was decided to use labour hours to recover overheads in both departments. Produce a new cost statement for job 762 assuming

a) budgeted labour hours in Machining Department would be 25,000

b) Job 762 requires 80 labour hours in Machining Department.

4 Write down one reason why the cost of the job is different in each case.

Send to tutor

Now get your answers to your study tutor either by post or handing it over personally. You will receive your tutor's assessment and comment back through the post as soon as can be managed.

3 Work Based Project

Time guide 60 mins

Take any product or service which your workplace is involved with and discover the following

1 The cost of the product or service. If it is a service explain the cost in the form of an appropriate cost unit.

2 The prime cost of the product.

3 The overheads content of the product/service costs broken down into

i) factory overheads
ii) administrative overheads
iii) selling and distribution overheads.

4 The cost centre that you are connected to.

5 The total cost of that cost centre for 1985, broken down where appropriate into department and overheads.

Send to tutor

Now get your answers to your study tutor either by post or handing it over personally. You will receive your tutor's assessment and comment back through the post as soon as can be managed.

PART E UNIT REVIEW

1 Return to objectives

Having completed your work on this unit let's review how you feel about each of our four opening objectives. I will repeat them here and add comment:

You should now be better able to:

* **IDENTIFY A COST AND A COST CENTRE**

We've seen that everything that happens within the workplace represents a cost in some way. To plan for the future, to maintain control and to measure performance against how you performed in other years, your forecast or your competitors, you need detailed information about costs, collected into cost centres which may be whole departments, groups of machines or even a single person.

You should now be better able to:

* **RECOGNISE YOUR ROLE IN THE COSTING PROCESS**

We've seen that the success of a costing system depends upon how efficiently and accurately all the information relating to hours worked, materials, idle time or any other kind of cost is passed on by supervisors in every work area. Doing this is sometimes tedious and time-consuming but I hope perhaps you understand better now how dependent the whole costing system is on the reliability of the information provided.

You should now be better able to:

* **IDENTIFY THE EFFECT OF OVERHEADS ON YOUR COST CENTRE**

As we said, everything that happens in the workplace represents a cost which has to be carried somewhere. We've seen how overhead costs have to be allocated to cost centres, if they relate entirely to specific cost centres, or apportioned by some agreed, acceptable method, if they relate to a number of different cost centres. We've also seen that in the end, all costs have to be transferred to the production department if you make something or to the department which actually carries out a service if you are in a service industry. In this way a complete picture of what it costs your workplace to make its product or provide its service can be put together and your customers can be charged a realistic price and plans for the future can be made.

You should now be better able to:

* **DISTINGUISH BETWEEN THE COSTS OVER WHICH YOU HAVE SOME CONTROL AND THOSE WHICH ARE OUTSIDE YOUR CONTROL.**

Perhaps you have sometimes felt angry and frustrated that, despite your efforts to control costs, it's still a struggle to stay within your budget and that various things which are outside your control are charged to your cost centre. Perhaps what we have said in this unit won't improve your temper but I hope at least that it has given you a broader picture of how overheads have to be carried by the workplace as a whole and of how they are costed out to the various cost centres in your workplace.

I hope that the work you have done was enjoyable and useful enough to encourage you to continue in your studies.

2 Extensions

I recommend that you take up as many of these extensions as you can. They will further increase your understanding and interest. You will also be able to check out a number of the ideas that I mention in the Unit. The extra time and effort will prove very worthwhile.

EXTENSION 1 Book: Choice Series of Self Learning Units 70: Accounting for Money

Author: Dennis Bainbridge

Publisher: Northern Regional Management Centre

EXTENSION 2 Book: Choice Series of Self Learning Units 71: Control via Budgets

Author: Alastair Clelland

Publisher: Northern Regional Management Centre

EXTENSION 3 Book: Choice Series of Self Learning Units 41: Stores Control

Author: David Austin

Publisher: Northern Regional Management Centre

EXTENSION 4 Book: Choice Series of Learning Units 73: Wage Payment Systems

Author: Ysanne Carlisle

Publisher: Northern Regional Management Centre

EXTENSION 4 Book: Cost Control for the Manager

Author: H J Goater

Publisher: Bell's Supervisory and Management Handbooks.

The chapter entitled 'Costs, Costs and More Costs' deals particularly with the question of overheads.

These extension opportunities can all be taken up via your Support Centre.

They will either have the materials or will arrange that you have access to the materials. However it may be more convenient to check out the materials with your Personnel or Training people at work - they may well give you access. There are other good reasons for approaching your own people, for example they will become aware of your interest and you can involve them in your development.

3 References

REFERENCE 1 Book: Official Terminology

Publisher: Institute of Cost and Management Accountants

REFERENCE 2 Book: Cost Accounting - A Managerial Emphasis

Author: Charles Horngren

Publisher: Prentice Hall

These references can all be taken up via your Support Centre. They will either have the materials or will arrange that you have access to the materials. However it may be more convenient to check out the materials with your Personnel or Training people at work - they may well give you access. There are other good reasons for approaching your own people, for example they will become more aware of your interest and you can involve them in your development.

If you do wish to make use of these references then don't think that you must read them right through. Just dip into them for a slightly wider treatment of the topic raised by the unit.

I should warn that the language and style of the writing is often difficult to cope with. So don't struggle with it too much. Do what I do when in difficulty, put the book back on the shelf and find a better one!

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